



National Aeronautics and Space Administration  
Goddard Space Flight Center

Wallops Flight Facility, Wallops Island, Virginia

# Inside Wallops

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## *Where no Telescope Has Gone Before*

Since 1931, when Karl Jansky accidentally invented the radio telescope, astronomers have found again and again that there's more to the Universe than the human eye can see. Radio telescopes, infrared and ultraviolet detectors, x-ray and gamma-ray satellites—they've revealed details of a cosmos teeming with exotic objects like black holes and pulsars that don't show up through the eyepiece of an optical telescope. Now, say astronomers, prepare to be surprised again.

Just last month scientists at NASA's Marshall Space Flight Center opened a new wavelength band for high-sensitivity astronomy: "hard" x-rays.

"What we've done is really just a first step," says Brian Ramsey, the leader of the MSFC team — but it's a big one.

Using a revolutionary telescope floating on a NASA scientific balloon 40 km above Earth's surface, Ramsey and his colleagues captured focused hard x-ray images of Cygnus X-1 and the Crab Nebula and its pulsar. They are the first such pictures of any heavenly body.

Earlier this year the team assembled a prototype double-barreled x-ray telescope consisting of two mirror assemblies with three shells each. It passed laboratory tests with flying colors, but that wasn't enough. An x-

ray telescope on the ground is like an optical telescope with the lens cap on.

"Cosmic x-rays don't reach Earth's surface," explains Ramsey, "because our atmosphere is opaque to this high energy radiation."

On May 23, the High Energy Replicated Optics (HERO) telescope was launched from Fort Sumner, N.M., on board a NASA 39.57 million cubic foot scientific balloon. The payload ascended to 131,000 feet altitude (above 99.7 percent of Earth's atmosphere) where the sky is mostly transparent to hard x-rays.

It worked beautifully says Ramsey. "We wanted to prove that we could point from a moving platform and get the full resolution of the optics — and we did it," says Ramsey. "That's important," he continued, "because balloons are less costly than space missions."

NASA's Wallops Flight Facility is working toward ultra-long-duration 'near space' balloon flights that stay up for 200 or 300 days. With that much time aloft, balloons can compete favorably with orbiting satellites at a fraction of the cost.

The balloon also carried a pair of high-energy detectors for Dr. Jonathan Grindlay, Harvard College Observatory. For more information on HERO visit: <http://science.nasa.gov/>

## *Students Successfully Fly Experiments*

High school students from across the United States are busy looking at data after successfully flying their experiments aboard a NASA sounding rocket Wednesday, June 6, from Wallops Island.



PAO Digital Photo

*Students begin the deintegration of the NASA Student Involvement Program payload.*

Launched at 6:50 a.m. EST, the experiments flew to an altitude 27 miles then descended by parachute into the Atlantic Ocean off the Wallops coastline. By 10:30 a.m., the students had started the deintegration of the payload and the first look at their experiments.

The students from Brooklyn, N.Y.; Northbrook, Ill.; Laramie, Wyo.; and Seattle, Wash., were participating in the launch through the NASA Student Involvement Program (NSIP).

The sounding rocket flight is one of two opportunities through NSIP that provide for high school students to apply classroom experiences to the field of engineering and science.

For a further look at the experiments, check out the following web site. [http://sprg.ssl.berkeley.edu/rocket\\_cast/index.htm](http://sprg.ssl.berkeley.edu/rocket_cast/index.htm)

## *Wallops Shorts.....*

### *On the road*

**Dave Hancock**, NASA Observational Science Branch, **Donna Hughes** and **Shane Whealton**, Occu-Health, Inc., participated in the Snow Hill High School Career Day on June 7.

### *Coming up*

NASA's P-3 Orion aircraft departs June 12 for the Mojave Desert to do calibration and validation test for ICE SAT.

Runway friction tests are scheduled for June 19-22.

NASA Langley Research Center aircraft noise tests scheduled June 25 - July 6.

NASA Black Brant V sounding rocket scheduled for launch from Wallops Island, June 26 - July 9.

## *Space Flight Academy Summer Camp*

The Virginia Space Flight Academy is accepting applications for students, 12 to 16 years old, who would like to experience the excitement of a week-long residential program.

During their stay they will be involved in programs that will allow several hands-on experiences from repairing the malfunctioning Hubble Space Telescope in "Alien Encounter" to designing a space station in "Project Space Colony. In addition to building and launching their own model rockets, young space explorers will conduct a simulated rocket launch from the NASA Wallops Flight Facility Control Center. New this year are activities that involve robotics and the use of kits to build actual robotic vehicles.

Small group activities are designed to develop leadership skills, problem solving abilities and teamwork.

There will be four one-week camps for 12 to 14 year olds. The dates are June 24-29, July 8-13, July 22-27 and August 5-10. An advanced camp for 14 to 16 year olds will be held Aug. 12-17. Each camp begins on Sunday afternoon and ends on Friday at 4 p.m. Tuition is \$550, which includes double occupancy housing, meals, transportation while at camp, a work-book, T-shirt and all instructional materials. A limited number of scholarships are available.

For more information call Bob Marshall, (757) 824-3800.

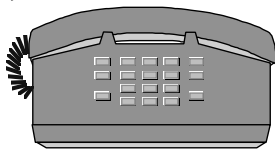
***We're Getting a new Phone System***

Our current telephone system was installed over 15 years ago and has run its course. It is apparent the system will soon become obsolete. To avoid this event, a new telecommunications system was chosen that will continue the great service we are accustomed to.

The East Campus in Greenbelt has been using the new equipment for some time, and it has performed well.

The new system represents overall progress for all users, but with progress comes change. To ensure that everyone is comfortable with the changes, training for the new system and Optiset telephones will be offered. Three types of training are being planned - (1) a computer-based training module will be linked to the Code 294 webpage that allows users to learn at their own pace; (2) closed-circuit television training is planned and (3) hands-on training is being planned for Greenbelt and Wallops.

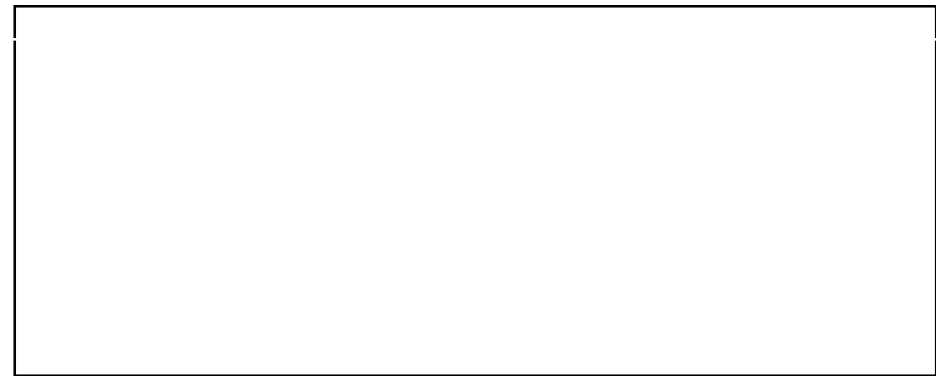
There are four models of Optiset telephones - Entry, Basic, Standard and Advanced Plus. Most users will receive the basic model, others will receive the Standard and Advanced Plus models that have a display feature. If you have a Rolm 120 you'll get an Optiset Basic. If you have a Rolm 240, you'll get an Optiset Standard, and if you have a Rolm Cypress, you'll get a Optiset Advance.



When the new system is operational, you will no longer have to dial "8" for long distance calls. All local and long distance access is achieved by dialing 9. For local calls you will dial 9 plus the local number. For long distance calls you will dial 91 plus the long distance number.

There will be no change to the 824 and 854 numbers at Wallops or 614 and 286 numbers at Greenbelt. Also, phone mail boxes, including greetings and messages, will be unaffected.

The change over for Wallops will be take place in early fall. For more information contact the Communications Office, x1234, or visit: <http://code294.gsfc.nasa.gov>



***Peer Awards***

Congratulations to the following Wallops employees who received awards during the Management Operations Directorate (Code 200) Annual Peer Awards Ceremony held June 5 at GSFC Greenbelt.

***Supervisor of the Year***

Bill Phillips

***Team Leader of the Year***

Bill Bott

***Innovation Award***

Mike Hill

Zach Barrett

***Litigation Team Award***

Jerry Wall

Jim Mitchell

Bill Bott

David Schuman

Greg Larosa

Catherine Donnelly

Gloria Sullivan

***Contractor Award***

WFF Occu-Health, Inc

Carlton Ruf

Donna Hughes

Michael Hooks

Owen Hooks

David Morris

Shari Silbert

Marianne Simko

***Cell Phone Presentation***

by Tom Long, Verizon Representative

June 18, 2001

10:30 a.m. - 1:30 p.m.

Check the Exchange Store (Bldg. E-2) bulletin board for current promotions! Sponsored by WEMA

***TSP Open Season is Well Underway***

During the next several weeks you'll be able to begin or make changes to participation in the government's tax-advantaged retirement investment program, the Thrift Savings Plan.

The open season began May 15 and will last until July 31. During this period, you may end your participation in the 401k-styled savings plan, change your contribution amounts, and/or change the way your future contributions are invested. Take the time to bone up on the program and decide what you want to do.

***NASA***

***Goddard Space Flight Center Technology Showcase 2001***

***"Expanding Scientific Discovery through Innovation"***

***June 14 - 15***

***Open House - June 16***

-See some of NASA's newest technologies

-Discuss how innovations move from research to new technology

-Attend forums to explore the intersection between research and new technology.

Visit the Showcase web site: <http://techshowcase.gsfc.nasa.gov/>

***Storm Watch***

Showers and thunderstorms can produce severe weather at this time of year, often in the form of dangerous lightning, hail and strong winds. In addition to the sun and heat hazards and the severe weather potential, the tropical storm and hurricane season is in full swing.

The hurricane season began on June 1, with the frequency of occurrences gradually escalating to the peak period of late August and September.

This year's "storm lineup" from the National Hurricane Center is as follows:

Allison

Barry

Chantal

Dean

Erin

Felix

Gabrielle

Humberto

Iris

Jerry

Karen

Lorenzo

Michelle

Noel

Olga

Pablo

Rebekah

Sebastien

Tanya

Van

Wendy

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